Expression levels of Drosha, Dicer and DGCR8 in patients Of Pre-eclampsia

Abstract

Introduction: Preeclampsia is a serious problem of pregnancy that is associated with high blood pressure and proteinuria in the second half of pregnancy. It is one of the three main causes of maternal and fetal mortality. This study aimed to investigate the expression of Drosha, Dicer and DGCR8 in patients with preeclampsia.

Materials and Methods: This is a case-control study and the statistical populations were healthy non-pregnant and pregnant women that referred to women Alavi Hospital. The subjects of the study were divided into three groups, the first group included pregnant women with pre-eclampsia and the second group included healthy pregnant women and third group (control) consisted of healthy non-pregnant women who were selected by random sampling. In this study, we evaluated the mRNA expression profiles of major mRNA processing machinery Drosha, Dicer, and DGCR8 in Preeclampsia, pregnant and healthy women. The data were be analyzed by Using descriptive statistics and using ANOVA, t test for independent samples and Fisher test.

Result: The amount of DGCR8 protein and enzyme Dicer and Drosha in pregnant women with Preeclampsia and healthy pregnant women were high than non-pregnant healthy women (control group).However, the enzyme Drosha in pregnant women with pre-eclampsia was less than healthy pregnant women.

Conclusion: we detected dysregulution of Dicer, Drosha, and DGCR8 expression in pregnant and Preeclampsia patients when compared to healthy control participants. Therefore, we favor the hypothesis that miRNA are involved in the development of Preeclampsia.

Keywords: pregnant women, Preeclampsia, MicroRNA, Dicer, Drosha